

## Note on the Returns for Domestic Nonfinancial Corporations in 1960–2005

The profitability of domestic nonfinancial corporations increased in 2005, as various rates of return on capital continued an increase that began in 2002.<sup>1</sup> In this note, it is calculated as the ratio of the net operating surplus of domestic nonfinancial corporations to produced assets.<sup>2</sup> Net operating surplus is a measure of the return to capital. It is the return accruing to capital after the labor costs and intermediate inputs are deducted from receipts. It

1. The estimates for 2005 are based on preliminary data from the national economic accounts, fixed asset accounts, and the flow of funds accounts.

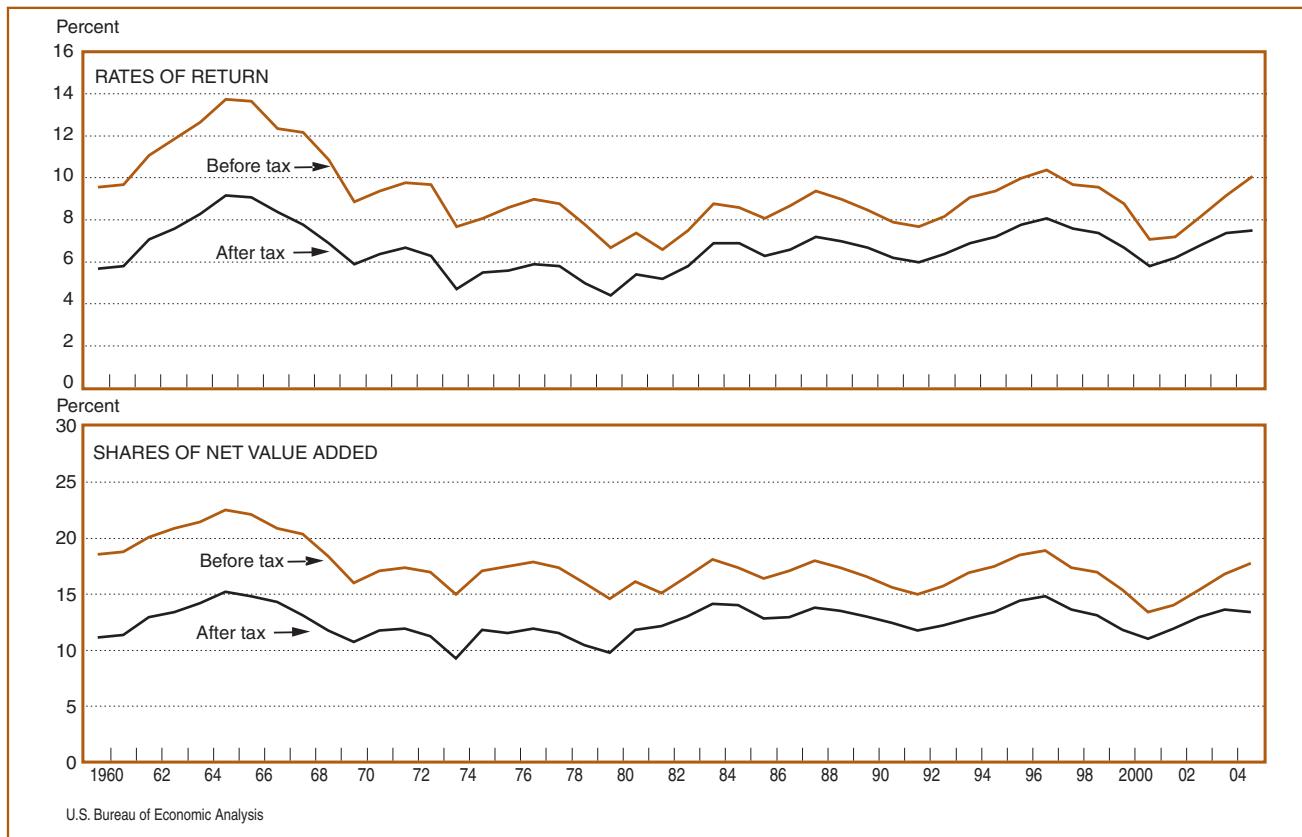
2. In this note, the net operating surplus is the sum of net interest and miscellaneous payments, business current transfer payments, and corporate profits from current production. In other contexts, another income measure may be appropriate; for example, for the economy as a whole, the net operating surplus might include a portion of proprietors' income.

can also be measured by the sum of corporate profits, net interest, and business transfer payments. Before subtracting corporate profits taxes, the rate of return on capital increased from 9.2 percent in 2004 to 10.1 percent in 2005. After subtracting corporate profits taxes, the rate of return on capital increased from 7.4 percent in 2004 to 7.5 percent in 2005. The after-tax rate of return rose above its 6.7-percent median value of the past 45 years.

Both the before-tax rate of return and the after-tax rate of return rose steadily in 1992–97, then turned down in 1998–2001, and then turned up in 2002–2005. In 2005, both recovered over 90 percent of their 1997 peaks (chart 1 and table 1).

**Definitions.** The net operating surplus measure was

**Chart 1. Rates of Return and Shares of Value Added in 1960–2005**



**Table 1. Rates of Return and Income Shares for Domestic Nonfinancial Corporations in 1960–2005**  
 [Percent]

	Rates of return					Shares of net value added					Tax liability as a percent of produced assets	
	Net operating surplus		Corporate profits		Net interest	Net operating surplus		Corporate profits		Net interest		
	Before tax	After tax	Before tax	After tax		Before tax	After tax	Before tax	After tax			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1960.....	9.6	5.7	8.7	4.7	0.7	18.4	10.9	16.6	9.1	1.3	3.9	
1961.....	9.7	5.8	8.7	4.8	0.7	18.6	11.1	16.6	9.1	1.4	3.9	
1962.....	11.1	7.1	9.9	5.9	0.9	19.9	12.7	17.8	10.6	1.5	4.0	
1963.....	11.9	7.6	10.6	6.4	0.9	20.7	13.2	18.6	11.1	1.5	4.3	
1964.....	12.7	8.3	11.4	7.1	0.9	21.3	14.0	19.1	11.9	1.6	4.3	
1965.....	13.8	9.2	12.4	7.8	1.0	22.4	15.0	20.2	12.7	1.6	4.6	
1966.....	13.7	9.1	12.2	7.6	1.1	22.0	14.6	19.6	12.2	1.8	4.6	
1967.....	12.4	8.4	10.8	6.8	1.2	20.7	14.1	18.0	11.4	2.0	4.0	
1968.....	12.2	7.8	10.6	6.1	1.3	20.2	12.9	17.4	10.1	2.1	4.4	
1969.....	10.9	6.9	9.0	5.0	1.5	18.2	11.5	15.0	8.4	2.6	4.0	
1970.....	8.9	5.9	6.7	3.7	1.8	15.8	10.5	11.9	6.6	3.2	3.0	
1971.....	9.4	6.4	7.3	4.3	1.8	16.9	11.5	13.1	7.6	3.2	3.0	
1972.....	9.8	6.7	7.7	4.6	1.7	17.2	11.7	13.5	8.0	3.0	3.1	
1973.....	9.7	6.3	7.5	4.1	1.8	16.8	11.0	13.0	7.1	3.2	3.4	
1974.....	7.7	4.7	5.4	2.4	1.9	14.8	9.0	10.5	4.7	3.7	3.0	
1975.....	8.1	5.5	6.1	3.5	1.7	16.9	11.6	12.6	7.3	3.6	2.6	
1976.....	8.6	5.6	6.8	3.8	1.4	17.3	11.3	13.6	7.6	2.9	3.0	
1977.....	9.0	5.9	7.1	4.1	1.4	17.7	11.7	14.0	8.0	2.8	3.0	
1978.....	8.8	5.8	6.9	3.9	1.5	17.2	11.3	13.5	7.6	2.9	3.0	
1979.....	7.8	5.0	5.8	3.0	1.6	15.8	10.2	11.7	6.2	3.3	2.7	
1980.....	6.7	4.4	4.5	2.2	1.8	14.4	9.5	9.7	4.8	4.0	2.3	
1981.....	7.4	5.4	5.0	3.0	2.0	15.9	11.6	10.8	6.5	4.3	2.0	
1982.....	6.6	5.2	4.2	2.9	2.1	14.9	11.9	9.5	6.5	4.9	1.4	
1983.....	7.5	5.8	5.2	3.5	2.1	16.4	12.8	11.3	7.7	4.5	1.7	
1984.....	8.8	6.9	6.3	4.4	2.2	17.9	13.9	12.8	8.9	4.4	1.9	
1985.....	8.6	6.9	6.0	4.3	2.2	17.2	13.8	12.0	8.5	4.5	1.7	
1986.....	8.1	6.3	5.2	3.4	2.2	16.2	12.6	10.4	6.8	4.5	1.8	
1987.....	8.7	6.6	5.9	3.7	2.2	16.9	12.7	11.3	7.2	4.2	2.1	
1988.....	9.4	7.2	6.5	4.3	2.3	17.8	13.6	12.3	8.1	4.4	2.2	
1989.....	9.0	7.0	5.7	3.7	2.9	17.2	13.3	10.8	7.0	5.4	2.0	
1990.....	8.5	6.7	5.3	3.4	2.8	16.4	12.8	10.1	6.5	5.4	1.9	
1991.....	7.9	6.2	4.9	3.2	2.5	15.4	12.2	9.5	6.3	4.9	1.6	
1992.....	7.7	6.0	5.3	3.5	2.0	14.8	11.5	10.0	6.8	3.9	1.7	
1993.....	8.2	6.4	5.9	4.0	1.8	15.5	12.0	11.2	7.6	3.4	1.9	
1994.....	9.1	6.9	6.9	4.7	1.7	16.7	12.6	12.7	8.6	3.1	2.2	
1995.....	9.4	7.2	7.1	4.9	1.8	17.3	13.2	13.1	9.0	3.3	2.2	
1996.....	10.0	7.8	7.8	5.5	1.7	18.3	14.2	14.2	10.1	3.1	2.3	
1997.....	10.4	8.1	8.1	5.8	1.8	18.7	14.6	14.6	10.5	3.2	2.3	
1998.....	9.7	7.6	7.3	5.1	2.0	17.2	13.4	12.9	9.1	3.5	2.2	
1999.....	9.6	7.4	7.0	4.7	2.1	16.8	12.9	12.1	8.3	3.6	2.2	
2000.....	8.8	6.7	5.8	3.8	2.4	15.2	11.6	10.1	6.5	4.1	2.1	
2001.....	7.1	5.8	4.1	2.8	2.4	13.2	10.8	7.7	5.3	4.4	1.3	
2002.....	7.2	6.2	4.8	3.7	1.9	13.8	11.7	9.1	7.0	3.5	1.1	
2003.....	8.2	6.8	5.7	4.3	1.8	15.2	12.7	10.6	8.1	3.4	1.4	
2004.....	9.2	7.4	6.8	5.1	1.7	16.6	13.4	12.3	9.2	3.1	1.7	
2005.....	10.1	7.5	7.9	5.4	1.7	17.6	13.2	13.9	9.5	3.0	2.5	
Averages												
1960–1969.....	11.8	7.6	10.4	6.2	1.0	20.2	13.0	17.9	10.6	1.7	4.2	
1970–1979.....	8.8	5.8	6.7	3.7	1.7	16.7	11.0	12.8	7.1	3.2	3.0	
1980–1989.....	8.1	6.2	5.4	3.5	2.2	16.5	12.6	11.1	7.2	4.5	1.9	
1990–1999.....	9.1	7.0	6.5	4.5	2.0	16.7	12.9	12.0	8.3	3.7	2.0	
2000–2005.....	8.4	6.7	5.9	4.2	2.0	15.3	12.2	10.6	7.6	3.6	1.7	
Median												
1960–2005.....	9.0	6.7	6.8	4.3	1.8	17.0	12.6	12.7	8.0	3.3	2.3	

NOTE. Columns 1–5 and 11 are percentages of the net stock of produced assets (averages of end-of-year values for adjacent years) and are valued at current cost. Columns 6–10 are percentages of net value added.

The estimates of corporate profits (and thus, of net operating surplus) include inventory valuation and capital consumption adjustments.

introduced in the 2003 comprehensive revision of the national income and product accounts. It is defined as profits from current production—profits before tax plus inventory valuation adjustment and capital consumption adjustment—plus net interest and miscellaneous payments plus business current transfer payments (table 2).<sup>3</sup>

In previous notes, property income of domestic nonfinancial corporations was the featured measure of income in the ratio.<sup>4</sup> Property income was defined as profits from current production plus net interest.

The difference between net operating surplus and property income is current business transfer payments. These payments consist of payments to persons (net), to government (net), and to the rest of the world (net) by private business for which no current services are performed; for example, they include payments for net insurance settlements—actual insured losses (or claims payable) less a normal level of losses, payments to government of fines, regulatory and inspection fees, and other nontaxes (largely donations and tobacco settlements), and net insurance settlements paid to state and local governments and to the rest of the world.

Produced assets of domestic nonfinancial corporations consist of the current-cost value of the net stock of equipment and software and of structures and the replacement-cost value of inventories.

Net operating surplus' share is calculated as the ratio of net operating surplus to net value added. It is the portion of net value added that accrues from the processes of production before deducting any explicit or implicit interest charges.

For the after-tax rate of return, corporate profits tax liability is subtracted from the net operating surplus or from profits from current production.

**Q-type ratios.** “Tobin's Q,” or simply “Q,” is the ratio of the valuation of assets in financial markets to the current-cost value of produced assets. A value of Q above 1 indicates that newly produced physical assets may be pur-

3. Corporate profits and net interest are based on tabulations of “company” data rather than “establishment” data. As a result, net operating surplus for domestic nonfinancial corporations includes income earned by financial establishments of those corporations, and it excludes income earned by nonfinancial units of financial corporations.

4. “Note on the Profitability of Domestic Nonfinancial Corporations, 1960–2001,” SURVEY OF CURRENT BUSINESS 82 (September 2002): 17–20.

**Table 2. Net Operating Surplus and Related Measures, 1960–2005**  
[Billions of dollars]

	Net operating surplus		Corporate profits			Net interest	Net value added	Produced assets <sup>1</sup>
	Before tax	After tax	Before tax	Tax liability	After tax			
1960.....	46.8	27.6	42.2	19.1	23.1	3.2	253.8	487.5
1961.....	48.4	29.0	43.2	19.4	23.8	3.7	260.5	498.3
1962.....	56.8	36.2	50.8	20.6	30.2	4.3	285.9	512.9
1963.....	62.9	40.2	56.5	22.8	33.8	4.7	304.7	530.9
1964.....	70.2	46.3	63.0	23.9	39.2	5.2	329.7	554.8
1965.....	81.4	54.2	73.3	27.1	46.2	5.8	362.8	590.3
1966.....	87.6	58.1	77.9	29.5	48.4	7.0	397.4	640.6
1967.....	86.4	58.6	75.2	27.8	47.3	8.5	416.8	697.6
1968.....	92.8	59.2	80.0	33.5	46.5	9.7	460.2	758.6
1969.....	90.8	57.5	74.9	33.3	41.6	12.7	498.1	831.7
1970.....	80.8	53.5	60.9	27.3	33.6	16.6	511.5	910.1
1971.....	93.4	63.4	72.1	30.0	42.1	17.6	552.4	991.1
1972.....	105.6	71.8	83.0	33.8	49.2	18.6	613.2	1,076.5
1973.....	115.8	75.4	89.4	40.4	49.0	21.8	688.1	1,198.5
1974.....	109.1	66.3	77.5	42.9	34.7	27.5	735.7	1,426.6
1975.....	133.1	91.2	99.7	41.9	57.7	28.4	788.7	1,645.7
1976.....	154.7	101.2	121.7	53.5	68.2	26.0	892.7	1,801.0
1977.....	178.9	118.3	141.4	60.6	80.9	28.5	1,008.8	1,991.8
1978.....	197.0	129.5	154.1	67.6	86.6	33.4	1,145.1	2,243.8
1979.....	200.0	129.4	148.8	70.6	78.1	41.8	1,268.6	2,577.1
1980.....	197.6	129.4	133.2	68.2	65.0	54.2	1,368.9	2,961.1
1981.....	246.4	180.4	167.7	66.0	101.7	67.2	1,554.5	3,350.5
1982.....	238.1	189.4	151.9	48.8	103.1	77.4	1,595.0	3,619.9
1983.....	280.5	218.7	192.9	61.7	131.2	77.0	1,715.4	3,744.6
1984.....	345.7	269.7	248.0	75.9	172.0	86.0	1,936.8	3,911.5
1985.....	353.8	282.8	246.3	71.1	175.2	91.5	2,054.6	4,119.3
1986.....	344.5	268.2	222.1	76.2	145.9	95.1	2,132.2	4,267.9
1987.....	386.0	291.8	259.7	94.2	165.5	96.4	2,290.6	4,440.9
1988.....	443.4	339.5	306.2	104.0	202.3	109.8	2,490.0	4,695.5
1989.....	447.9	346.7	282.9	101.2	181.7	142.0	2,610.7	4,967.2
1990.....	445.9	347.4	274.3	98.5	175.8	146.2	2,722.3	5,225.4
1991.....	424.2	335.6	261.5	88.6	172.9	135.9	2,758.3	5,391.8
1992.....	425.7	331.3	289.2	94.4	194.8	111.3	2,882.3	5,508.9
1993.....	470.8	362.8	339.2	108.0	231.2	102.0	3,034.4	5,716.9
1994.....	546.9	414.0	415.9	132.9	283.1	101.0	3,278.0	6,015.6
1995.....	597.8	456.8	452.5	141.1	311.4	115.2	3,464.5	6,371.1
1996.....	673.1	520.0	523.2	153.1	370.1	111.9	3,673.0	6,712.3
1997.....	736.3	574.4	573.4	161.9	411.5	124.0	3,934.7	7,056.0
1998.....	717.4	558.8	538.3	158.6	379.7	143.8	4,161.7	7,381.8
1999.....	742.7	571.5	537.6	171.3	366.3	160.2	4,427.0	7,720.4
2000.....	716.5	546.3	476.4	170.2	306.2	191.7	4,704.3	8,171.7
2001.....	611.8	500.1	357.2	111.7	245.5	204.0	4,646.7	8,645.2
2002.....	650.8	553.7	429.4	97.1	332.3	167.4	4,728.2	9,001.6
2003.....	753.4	626.9	524.9	126.5	398.3	166.2	4,943.1	9,205.0
2004.....	879.2	713.2	653.9	165.9	487.9	164.9	5,305.1	9,596.6
2005.....	1,013.2	758.5	798.6	254.7	543.9	171.5	5,744.9	10,079.6

1. Produced assets consist of fixed assets (structures, equipment and software) and inventories that are valued at current cost at yearend. Estimates of fixed assets are available in table 6.1 on BEA's Web site at [www.bea.gov](http://www.bea.gov) under “Fixed Assets.” Inventories are from legal form and industry detail underlying NIPA table 5.12.

chased more cheaply than (the ownership claims to) existing assets. Such a situation may induce businesses to purchase newly produced physical assets instead of acquiring existing assets; alternatively, it may induce financial investors to reduce the prices that they offer for financial assets. Similarly, a value of Q below 1 indicates that existing physical assets may be acquired more cheaply than newly produced assets.

Three Q-type ratios for domestic nonfinancial corporations are defined as follows:

- Q1 is calculated as the market value of outstanding equity divided by the net stock of produced assets.
- Q2 adds the book value of outstanding corporate bonds to the numerator used in Q1.<sup>5</sup> Adding the bonds makes Q2 a more complete measure of invested capital, but adding them at historical cost is clearly inconsistent with the underlying rationale for Q, which is to provide a comparison of market valuation with replacement cost.
- Q3 adds an estimate of the market value of outstanding corporate bonds to the numerator used in Q1. It also subtracts net liquid assets and land (which is not included in the denominator) from the numerator.<sup>6</sup>

All three ratios trace similar patterns. In 1999, they reached record levels. In 2000, all three dropped sharply and continued to decrease until 2002 (chart 2 and table 3). In 2003, all three ratios rose sharply. In 2005, all three ratios were above 1, but they remained well below their 1999 peaks.

5. "Outstanding bonds" is a gross estimate; it is not net of financial assets and debt held by nonfinancial corporations.

6. Net liquid assets is estimated as financial assets less liabilities other than municipal securities, corporate bonds, and mortgages. The data are from the Board of Governors of the Federal Reserve System, *Flow of Funds Accounts of the United States*, statistical release Z.1 and "Selected Interest Rates," statistical release H.15 (Washington, DC: Board of Governors). The data are available on the Federal Reserve's Web site at <[www.federalreserve.gov/releases/Z1/](http://www.federalreserve.gov/releases/Z1/)> and <[www.federalreserve.gov/releases/h15](http://www.federalreserve.gov/releases/h15)>.

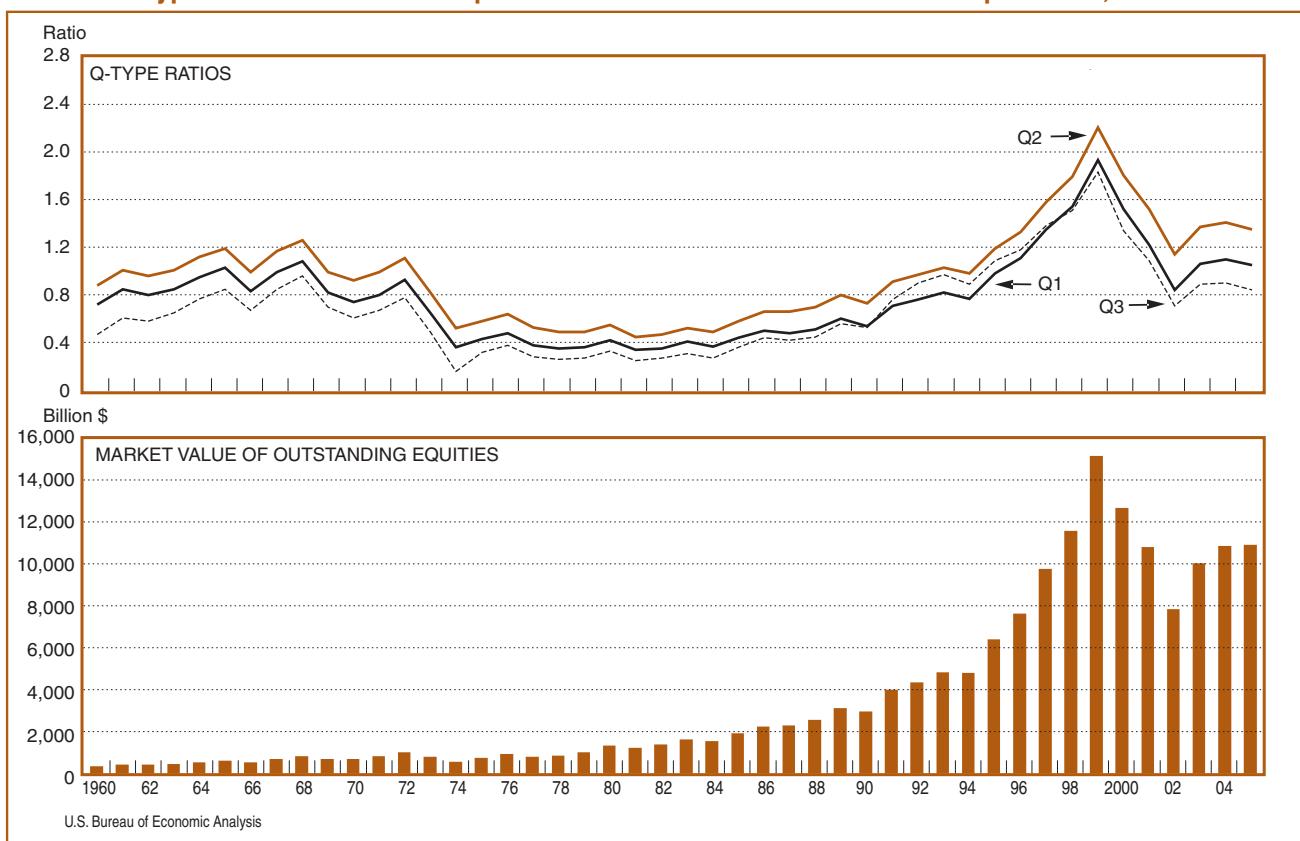
**Table 3. Q-Type Ratios, 1960–2005**

	Q1 ratio <sup>1</sup>	Q2 ratio <sup>2</sup>	Q3 ratio <sup>3</sup>
1960.....	0.75	0.91	0.50
1961.....	0.88	1.04	0.64
1962.....	0.83	0.99	0.61
1963.....	0.88	1.04	0.68
1964.....	0.98	1.15	0.80
1965.....	1.06	1.22	0.88
1966.....	0.86	1.02	0.70
1967.....	1.02	1.20	0.88
1968.....	1.11	1.29	0.99
1969.....	0.85	1.02	0.73
1970.....	0.77	0.95	0.64
1971.....	0.83	1.02	0.70
1972.....	0.96	1.14	0.81
1973.....	0.68	0.85	0.52
1974.....	0.39	0.55	0.19
1975.....	0.46	0.61	0.35
1976.....	0.51	0.67	0.41
1977.....	0.41	0.56	0.31
1978.....	0.38	0.52	0.29
1979.....	0.39	0.52	0.30
1980.....	0.45	0.58	0.36
1981.....	0.37	0.48	0.28
1982.....	0.38	0.50	0.30
1983.....	0.44	0.55	0.34
1984.....	0.40	0.52	0.30
1985.....	0.47	0.61	0.39
1986.....	0.53	0.69	0.47
1987.....	0.51	0.69	0.45
1988.....	0.54	0.73	0.48
1989.....	0.63	0.83	0.59
1990.....	0.57	0.76	0.56
1991.....	0.74	0.94	0.79
1992.....	0.79	1.00	0.93
1993.....	0.85	1.06	1.00
1994.....	0.80	1.01	0.92
1995.....	1.01	1.22	1.12
1996.....	1.14	1.36	1.21
1997.....	1.38	1.61	1.41
1998.....	1.57	1.82	1.54
1999.....	1.96	2.23	1.86
2000.....	1.55	1.83	1.37
2001.....	1.25	1.55	1.12
2002.....	0.87	1.17	0.74
2003.....	1.09	1.40	0.92
2004.....	1.13	1.44	0.93
2005.....	1.08	1.38	0.87

1. Q1 is the market value of outstanding equity divided by the net stock of produced assets valued at current cost.

2. Q2 is the market value of outstanding equity plus book value of outstanding corporate bonds divided by the net stock of produced assets valued at current cost.

3. Q3 is the market value of outstanding equity plus market value of outstanding corporate bonds less net liquid assets and less the value of land divided by the net stock of produced assets valued at current cost.

**Chart 2. Q-Type Ratios and Market Capitalization of Domestic Nonfinancial Corporations, 1960–2005**

### Calculating the Market Value of Outstanding Bonds

The market value of bonds outstanding is approximated by a procedure developed by James Tobin and Dan Sommers ("Explanation of Revised Estimates of Tobin's 'Q' Ratio, 1950–97" [April 20, 1999], unpublished). In brief, the process begins with the published book values of bonds outstanding and the assumption that a bond matures in 10 years and carries a coupon rate equal to the Baa rate that prevailed in the year the bond was issued. The maturity assumption implies that the book value of

bonds issued in year  $t$  is equal to the change in the book value of outstanding bonds in year  $t$  plus the book value of bonds issued 10 years earlier. In year  $t$ , the market value of bonds issued in earlier years is estimated as the present value of principal and (semiannual) coupons not yet paid on those bonds (discounted by the interest rate on 10-year Baa bonds in year  $t$ ). Finally, the market value of outstanding bonds in year  $t$  is the sum of the market values of bonds issued in years  $t-9$  through  $t$ .